

2045 Metropolitan Transportation Plan

The Future of Mobility



Plan Summary Handout



The Area Plan Commission of Tippecanoe County
June 2017

<http://www.tippecanoe.in.gov/378/Area-Plan-Commission-APC>

EXECUTIVE SUMMARY

The Metropolitan Transportation Plan (MTP) is one of the cornerstones of the adopted Comprehensive Plan for Tippecanoe County; it supports, and is supported by its other components. Formal transportation planning began in the 1960's when initial studies culminated in the first adopted Plan in 1978 which documented the needs through the year 2000. The 2045 Metropolitan Transportation Plan is the seventh since the original and documents community needs to the year 2045. This Plan continues the emphasis started in the 2040 MTP of incorporating a broader definition of transportation planning; one that acknowledges the increased use of transit and non-motorized forms of travel.

METHODOLOGY

The 2045 MTP builds closely on the analysis and recommendations of the community's previous transportation plans. The Plan is a product of significant cooperative effort by the general public, elected officials and agency staffs. The recommendations are based on historic trends, current and future needs, and updated forecasts of traffic volumes, dwelling units and employment growth. The list of highway projects in this Plan comes from project recommendations from previous plans, results of an updated traffic forecasting computer simulation model as well as recommendations from the Citizen and Technical Committees. This plan continues to emphasize the increased role of transit, bicycling and walking and requires their consideration in all federally funded highway projects under the MPO Complete Streets Policy.

As part of the effort to forecast traffic volumes in 2045, estimates of future population and employment growth were developed by the Area Plan Commission (APC). Staff reviewed the Comprehensive Plan, Census data, past and other current forecasts, and consulted with community leaders (Table 1, Socioeconomic Data Summary). Overall current growth and trends are expected to continue. There will be two new employment and residential growth areas: on the west side of Purdue University campus and along the Hoosier Heartland highway. The historical residential and industrial growth patterns in the community will continue. Future growth is consistent with and have been directed by the long established Comprehensive Plan for Tippecanoe County and is able to accommodate the projected growth.

Table 1, Socioeconomic Data Summary

	1970	1980	1990	2000	2010	2045
Total Population	109,378	121,702	130,598	148,955	172,780	242,500
Total # of Dwelling Units	34,197	43,130	48,134	58,343	71,096	98,200
Number of Households	32,320	40,681	45,618	55,266	65,532	92,800
Persons per Household	3	2.59	2.5	2.42	2.42	2.38
Total Employment	52,015	64,915	80,290	99,143	94,911	140,500

Source: U.S. Department of Commerce: Bureau of the Census, Census of Population and Housing, and Bureau of Economic Analysis, Regional Economic Information Systems; Division of Housing and Food Services, Purdue University, APC Land Use Survey; and APC Staff Analysis,

THE PLAN

The community has been very successful in the last 45 years and has built most of the major roads that were initially conceived in the 1970s. The 2045MTP documents that the community now desires more than just roads and prefers to focus on diversifying our transportation options by developing other modes of travel as well. This plan continues the emphases from the 2040MTP that identifies the steps needed to ensure our highways truly work for all users: bicyclists, walkers, automobile drivers, transit users and freight deliveries. It recommends 175 highway projects, 94 sidewalk projects, 128 trail projects and 57 bike lane and shared lane projects. The Plan further recommends; continuing the 10% set-aside of Federal STP funds for independent trails, the development of a tree replacement policy for all Federal Aid projects, the community identifies a sustaining source of funds for safety and education awareness programs and the establishment of a multi-jurisdictional bicycle coordinator position. It also acknowledges that we can't

build our way out of congestion and places greater importance on the efficiency and sustainability of our highway system.

The Plan is a joint effort by the staffs of the APC, Tippecanoe County, the cities of Lafayette and West Lafayette, with input from local citizens, Purdue University, the local transit provider (CityBus) and the Indiana Department of Transportation (INDOT). The Plan was reviewed by the MPO's Citizen Participation Committee and recommended by the Technical Committee and adopted by the Policy Board.

COSTS AND FEDERAL FUNDING

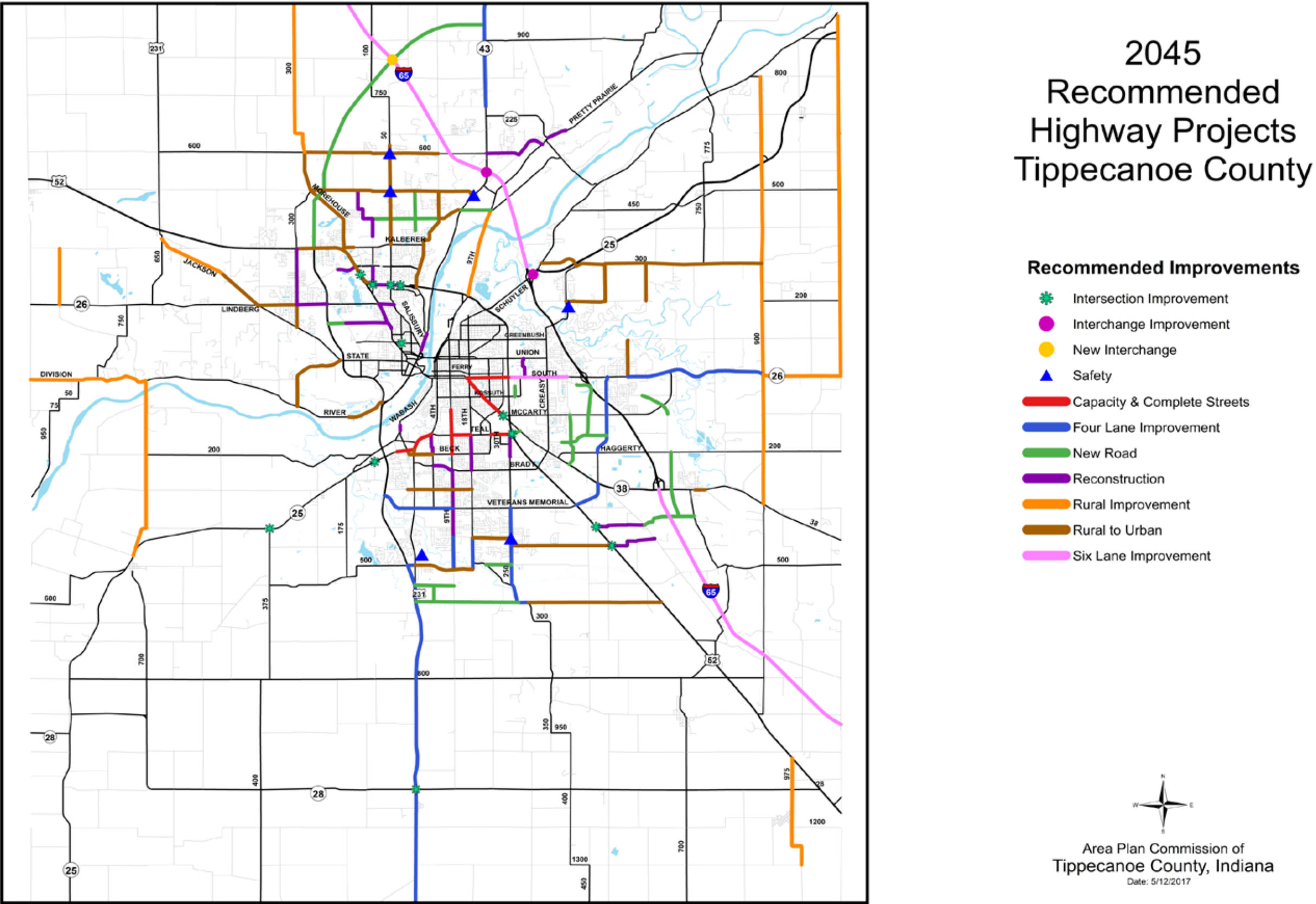
Obtaining the financial resources to implement the projects in the Plan will be the greatest challenge facing the community. The plan documents the need for more than \$1.7 billion in highway improvements by 2045 with state highways accounting for 58% and local roads 42% (\$699,139,000) of the total. However, there are insufficient

Table 2, Total Project Costs

	Cost	Percentage
Lafayette	\$206,705,000	(12%)
West Lafayette	\$83,975,000	(5%)
Tippecanoe County	\$403,440,000	(24%)
INDOT	\$987,516,000	(58%)
Dayton	\$10,700,000	(0.6%)
Battle Ground	\$8,000,000	(0.5%)
IDNR	\$11,300,000	(0.1%)
Grand Total	\$1,711,636,000	
Local Need Total	\$699,139,000	

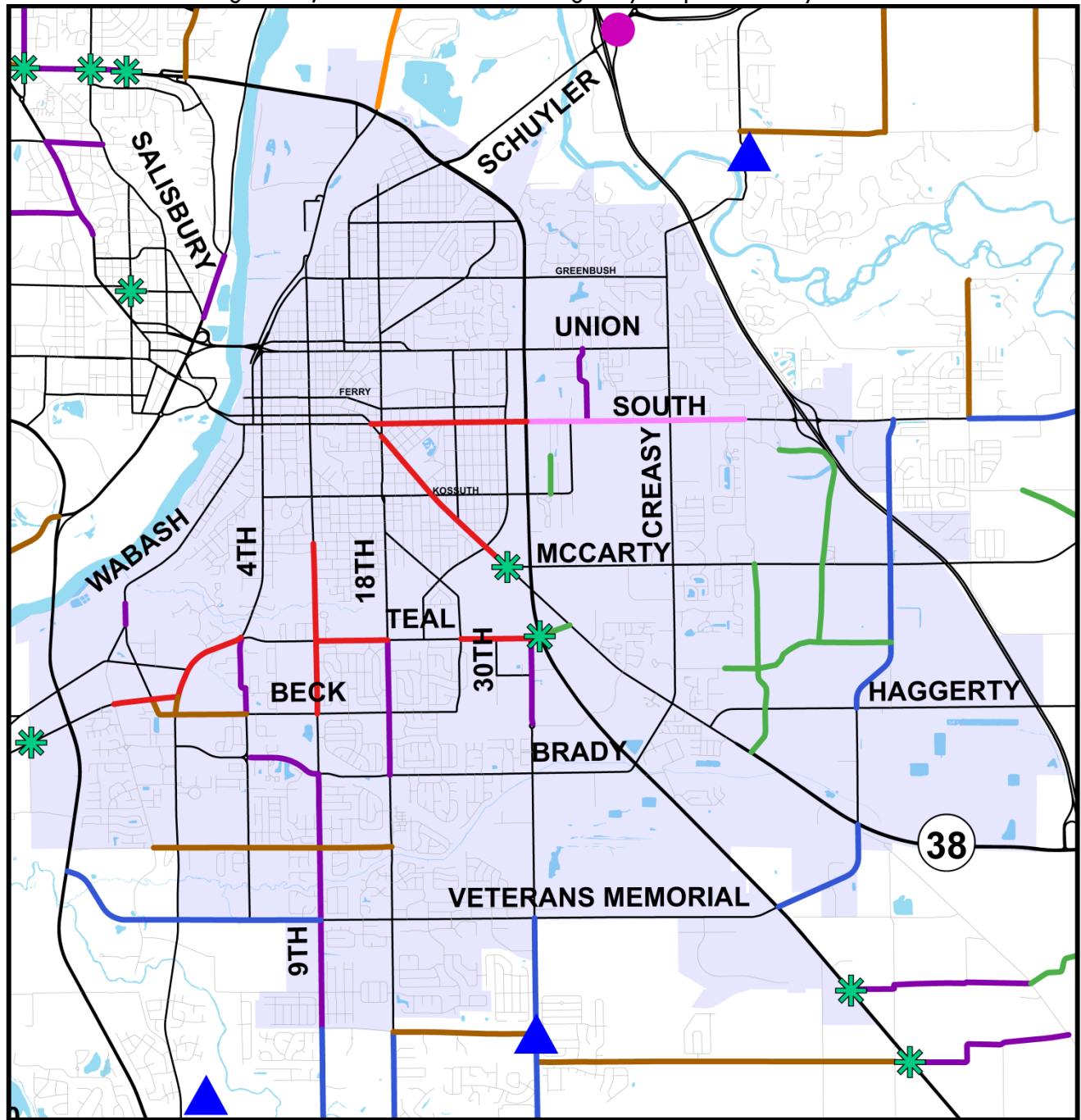
funds to address all these needs. While there are many uncertainties about future Federal funding beyond the Fixing America's Surface Transportation (FAST) Act, we estimate the community will receive approximately \$168,000,000 in Federal road funds over the next 28 years. This is less than 25% of the total local need. The list of locally sponsored highway projects has been financially constrained to reflect what this community might reasonably expect to receive from the Federal Highway Trust Fund (Table 28). Local and other sources of funding will be used to meet many of the needs not covered by Federal funding.

Figure 49. 2045 Recommended Highway Projects



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Figure 50, 2045 Recommended Highway Projects – Lafayette

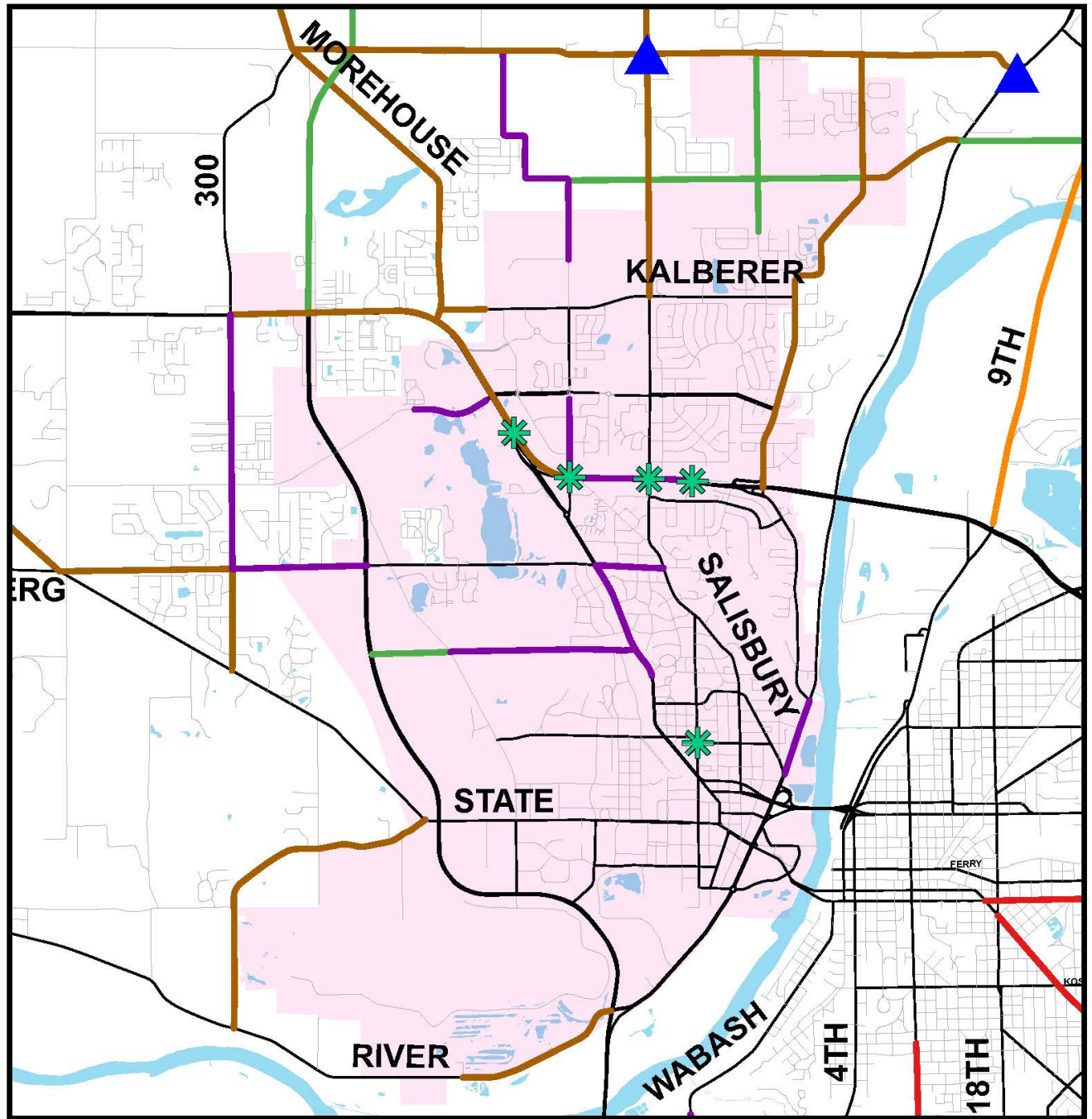


Recommended Improvements for Lafayette

- | | |
|--|---|
| — Capacity & Complete Streets | ✱ Intersection Improvement |
| — Four Lane Improvement | ● Interchange Improvement |
| — New Road | ● New Interchange |
| — Reconstruction | ▲ Safety |
| — Rural Improvement | Lafayette City Boundary |
| — Rural to Urban | |
| — Six Lane Improvement | |

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 Date: 5/1/2017

Figure 51, 2045 Recommended Highway Projects – West Lafayette



Recommended Improvements for West Lafayette

- | | |
|--|---|
| — Capacity & Complete Streets | ✱ Intersection Improvement |
| — Four Lane Improvement | ● Interchange Improvement |
| — New Road | ● New Interchange |
| — Reconstruction | ▲ Safety |
| — Rural Improvement | |
| — Rural to Urban | |
| — Six Lane Improvement | West Lafayette City Boundary |



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Figure 52. Recommended Sidewalk Projects

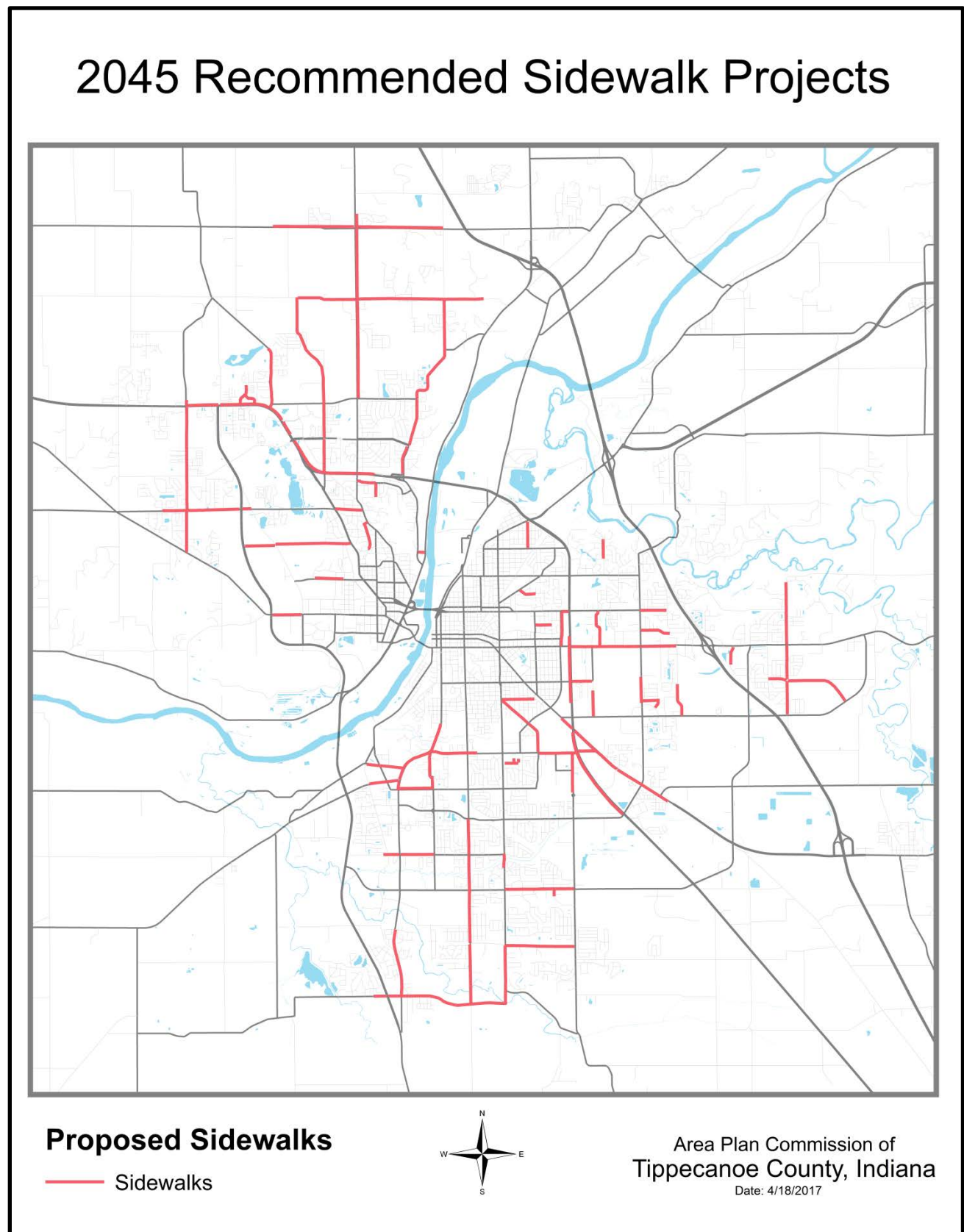


Figure 53. Recommended Trail Projects

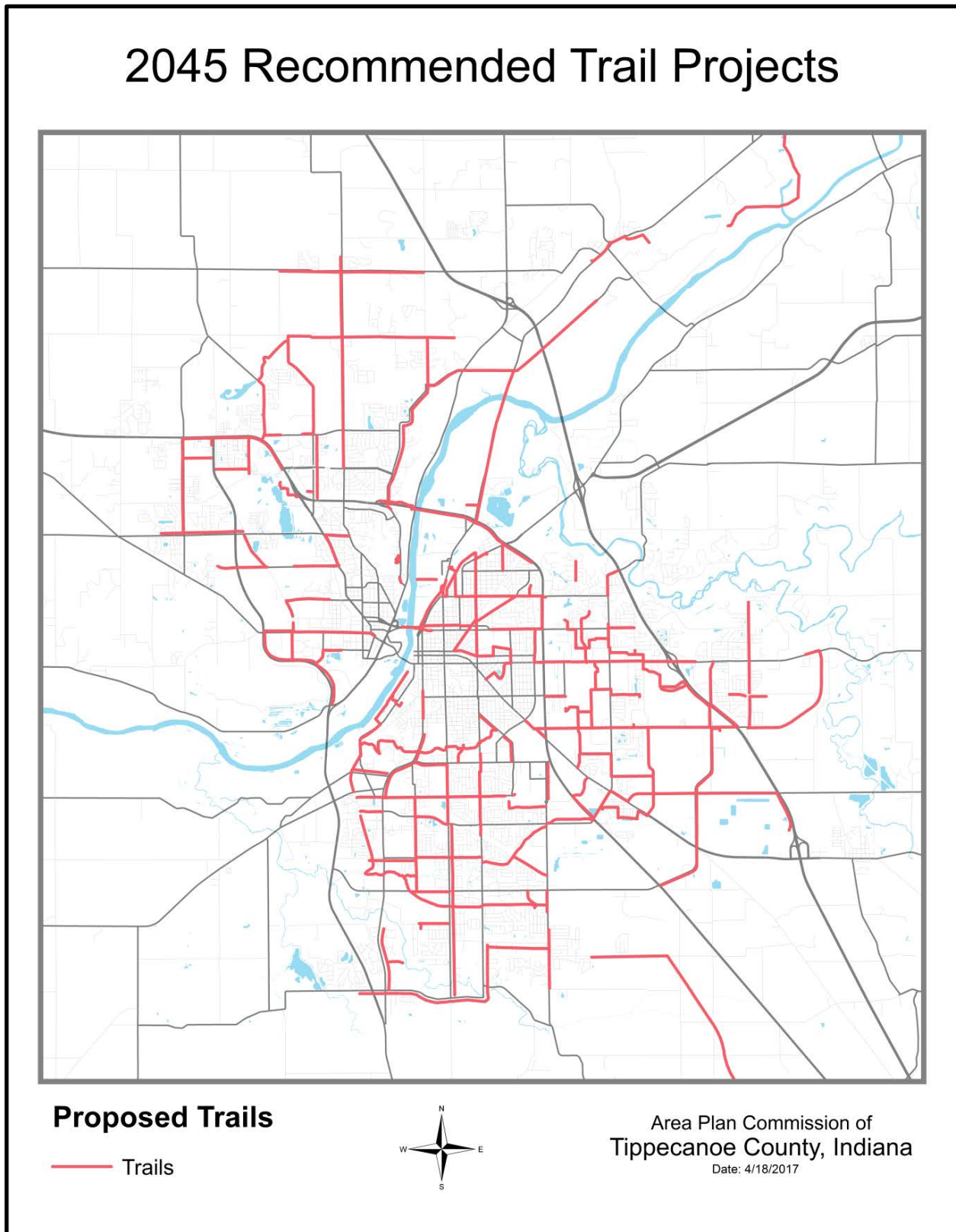
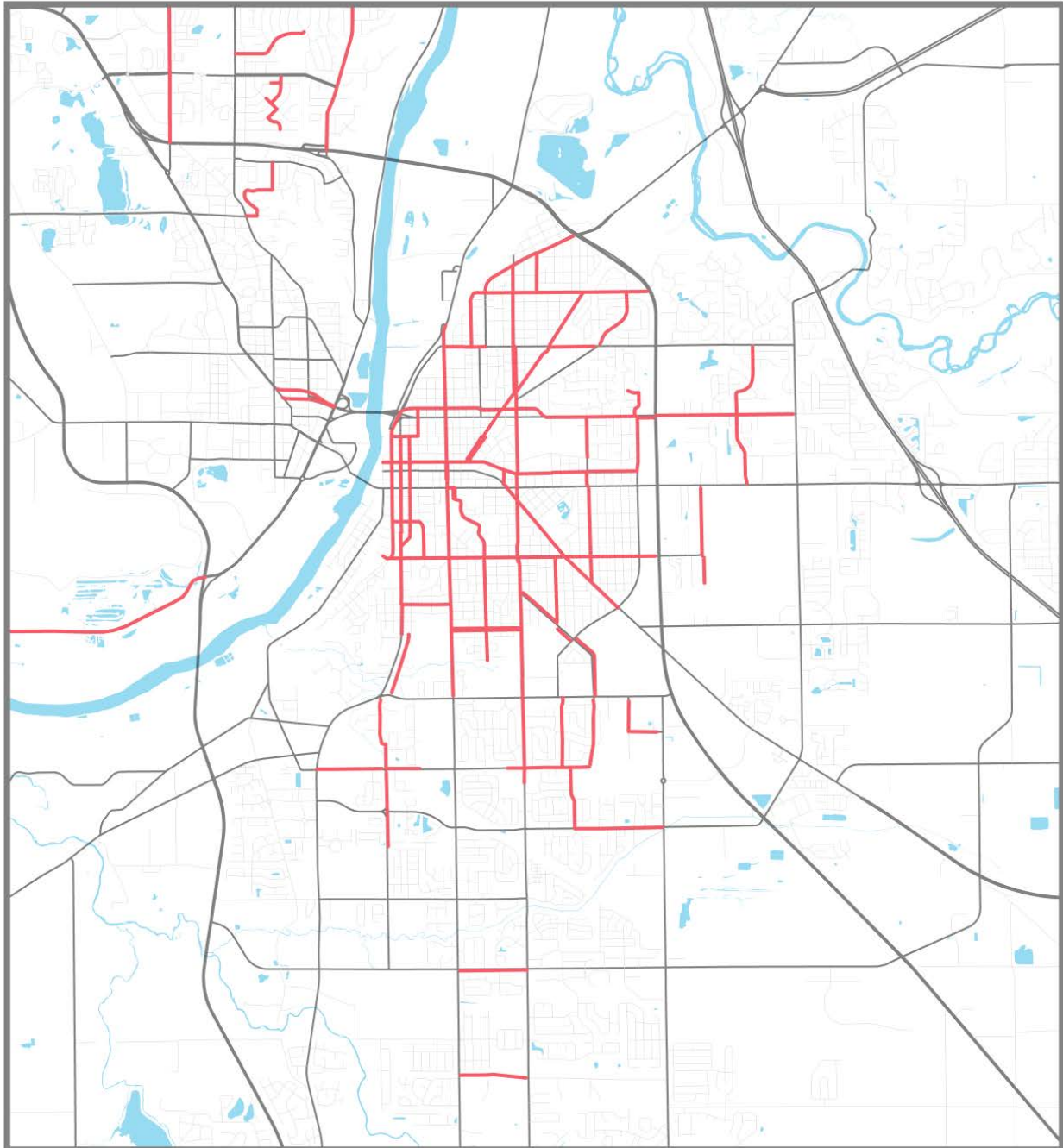


Figure 54, Recommended On-Road Bicycle Lanes and Shared Lanes

2045 Recommended Bicycle Lanes & Shared Lanes



Proposed Improvement Type

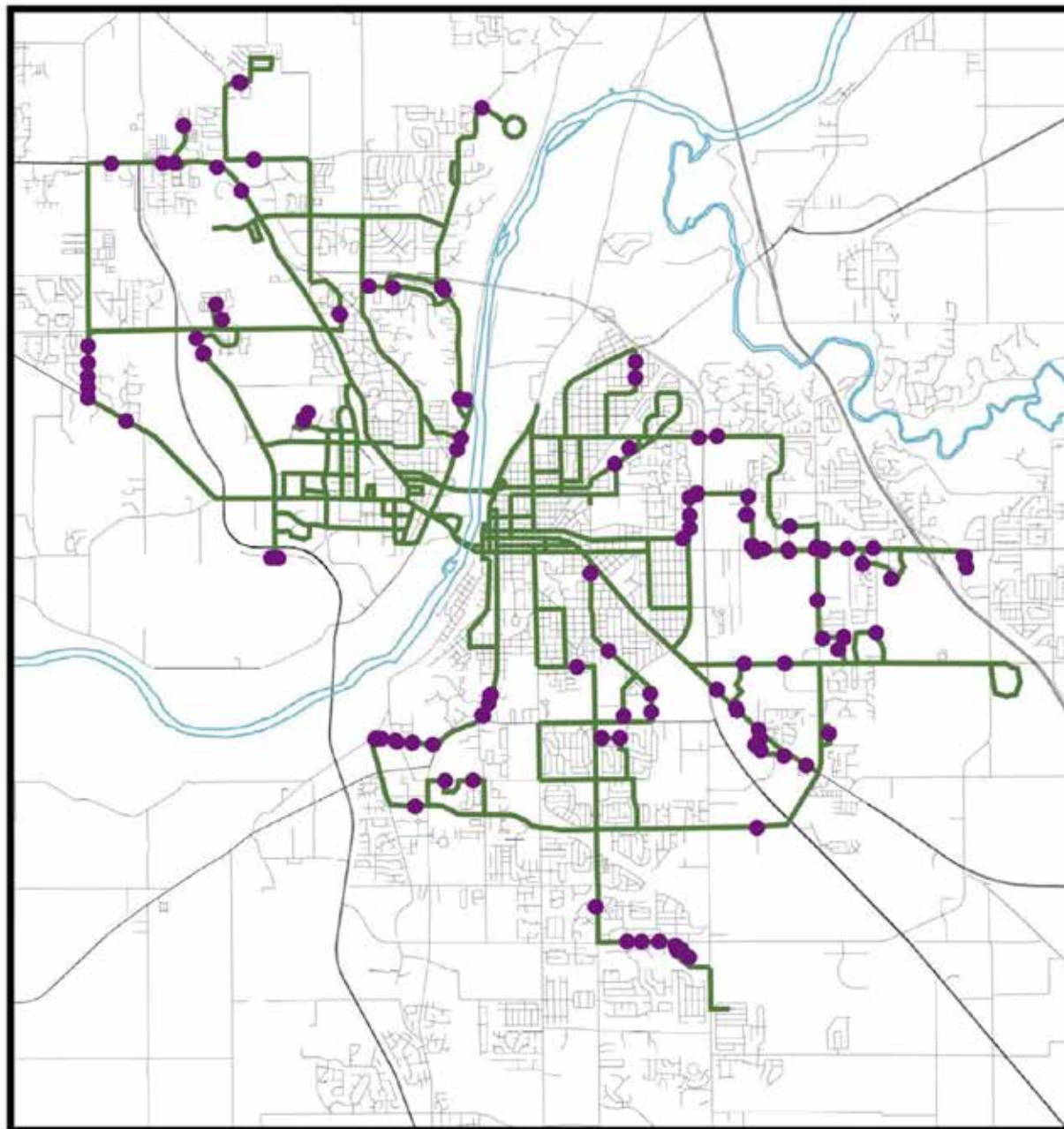
— Bike Lanes & Shared Lanes



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Figure 33. Bus Stops Needing Connections to Sidewalks



City Bus Stops
Stops Not Located Adjacent to
a Sidewalk, Side Path,
Bike Lane or Trail

*Not Included in
Future Improvement Projects*

Map Legend
— Bus Routes
● Bus Stops



Figure 40. CityBus Routes Supply and Demand

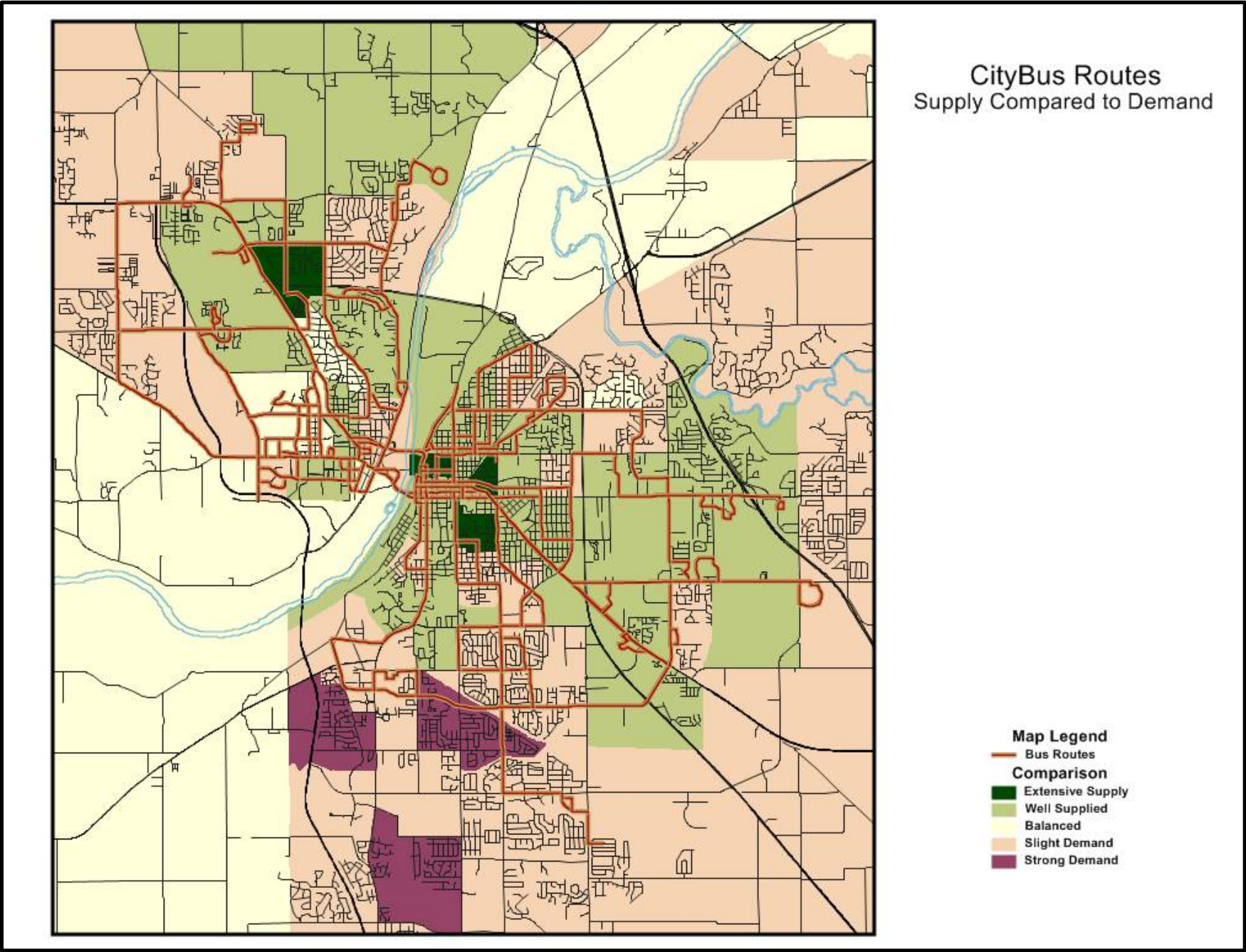


Table 28, Fiscally Constrained Federal Aid Project List

Project	Location	Priority	Juris.	CN Cost Est.	Federal %
Bicycle, Pedestrian and Trail facilities (TAP and 10% of STP)					22,000,000
Twyckenham Blvd	Poland to 9th	In Tip	Laf	3,700,000	2,960,000
Park East Blvd	Haggerty Lane to SR 38	In TIP	Laf	2,300,000	1,840,000
Safety Ed. Program	All jurisdictions in MPO	In TIP	All	37,500	30,000
Twyckenham Trail	Old Romney Rd to Old US 231	In TIP	Laf	275,000	220,000
Klondike Road	US 52 to Lindberg Road	In TIP	TC	5,700,000	4,560,000
Lindberg Road	Klondike to US 231	In TIP	TC	2,600,000	2,080,000
North Yeager Rd	WL City Limits to CR 500N	In TIP	TC	4,800,000	3,840,000
Morehouse Rd	Sag Pkwy/SP52 to CR 500N	In TIP	TC	8,000,000	6,400,000
Concord Rd.	At CR 430S	In TIP	TC	1,600,000	1,280,000
County Farm Rd	At CR 500N & CR 600N	In TIP	TC	1,500,000	1,350,000
McCutcheon Ped	McCutcheon HS & Mayflower ES	In TIP	TC	600,000	540,000
North River Road	At CR 500N	In TIP	TC	940,000	846,000
Cherry Ln Ext.	McCormick Ln to US 52/231	In TIP	WL	4,500,000	3,600,000
Soldiers Home Rd	Sag. Pkwy. to Kalberer Rd	In TIP	WL	9,100,000	7,280,000
Happy Hollow Tr	Adjacent to realigned Entrance	In TIP	WL	675,000	540,000
Sag. Pkwy. Trail	Happy Hollow to Wabash Ri Br	In TIP	WL	1,600,000	1,280,000
Lindberg	Northwestern to Salisbury	In TIP	WL	2,000,000	1,600,000
South 9th St	Twyckenham Blvd to Vet. M P	High	Laf	7,600,000	6,080,000
Soldiers Home Rd	Kalberer Rd to City Limits	High	WL	11,000,000	8,800,000
Cherry	McCormick to Northwestern	High	WL	4,700,000	3,760,000
Yeager Rd	US 52 to Cumberland Ave	High	WL	2,700,000	2,160,000
CR 600N	Morehouse to CR 75E	High	TC	15,000,000	12,000,000
CR 450S/430S	US 52 to New Castle	High	TC	6,000,000	4,800,000
North 9th St	Sagamore Pkwy to Swisher Rd	High	TC	7,500,000	6,000,000
South 18th St	CR 430S to CR 510S	High	TC	9,500,000	7,600,000
South 9th St	CR 430S to CR 510S	High	TC	10,000,000	8,000,000
CR 450S	Concord Rd to US 52	High	TC	11,600,000	9,280,000
CR 430S	South 18th to Concord Rd	High	TC	4,300,000	3,440,000
Concord Rd	S of Veterans M. P. to CR 450S	High	TC	9,900,000	7,920,000
South 9th St	Veterans M. P. to CR 430S	Med	Laf	13,000,000	10,400,000
Northwestern Ave	Lindberg Rd to Cherry Ln	Med	WL	2,000,000	1,600,000
CR 50W	WL City Limits to N of CR 600N	Med	TC	10,000,000	8,000,000
36th Street	Union St to South St	Med.	Laf	2,800,000	2,240,000
CR 75E	Soldiers Home Rd to CR 500N	Med	WL	7,500,000	6,000,000
Total Project Cost				182,377,500	168,286,000
Reasonably Available From The Federal Highway Trust Fund					\$168,187,500

